# Weather Data

**Topic:** Atmosphere

**Objectives:** Read and record air temperature on a maximum/minimum thermometer
Read and record rainfall on a standard rain gauge

**Grade Level:** 4 – 12

**Time:** 10 - 15 minutes

**Materials:** instrument shelter, maximum/minimum thermometer, standard rain gauge, large drawing of a maximum/minimum thermometer, writing pads, pens and pencils

Vocabulary:
maximum
minimum
temperature range
precipitation
gauge

**Location:** instrument shelter

**Background:** The air temperature varies throughout the day. The highest temperature in a day is that day's maximum temperature. The lowest temperature is the minimum temperature for the day. A maximum/minimum thermometer is made so that you can read the current air temperature as well as the high and the low for the day. In this activity you will use weather instruments to read and record current, maximum and minimum temperature as well as the amount of precipitation.

**Advance Preparation:** At the instrument shelter, use a drawing of a maximum/minimum thermometer to explain the correct way to read the air temperature data. Explain how to read the rain gauge.

**Procedure:**

1. Read and record the current air temperature, the maximum air temperature and the minimum air temperature on the thermometer.

2. Using the rain gauge, read and record the rainfall.

**Questions to think about and discuss:**

1. The temperature range is the difference between the maximum and minimum air temperatures. What was today's air temperature range? When do you suppose the minimum temperature occurred? When did or when will the maximum temperature occur? What factors do you think cause the daily range in temperature?

2. What sorts of weather conditions do you suppose would create the greatest daily temperature range? During which season do you think, on average, the greatest temperature ranges would occur? Which season might produce the smallest daily temperature ranges?

3. Why do you think the thermometer is kept in the instrument shelter? Why do you think the shelter is built so that air can circulate in and out of the box?

4. Look at where the instrument shelter is located. What surrounding factors might influence the air temperature readings or the rainfall measurement? Where would not be a good place to put the instrument shelter?

5. Why do you suppose it is important to know about air temperature and rainfall? What impact does air temperature and rainfall have on the plants and animals and soils of a region? What impact does air temperature and rainfall have on you?